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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,226	10/09/2003	Koji Irikura	0666.1400002	6480
26111	7590	09/22/2004	EXAMINER	
STERNE, KESSLER, GOLDSTEIN & FOX PLLC 1100 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			VANAMAN, FRANK BENNETT	
		ART UNIT		PAPER NUMBER
				3618

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/681,226	IRIKURA ET AL. <i>[Signature]</i>	
	Examiner	Art Unit	3618
	Frank Vanaman		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 02 July 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 16-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 16-25 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

Status of Application

1. Applicant's amendment, filed July 2, 2004, has been entered in the application. Claims 16-25 remain pending.

Claim Rejections - 35 USC § 102

2. The pertinent portions of 35 USC may be found in a previous office action.
3. Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Hopkins et al. (US 4,174,762). Hopkins et al. teach an apparatus for steering and driving a vehicle including a first transmission (32, 40, 42, 44, 46, 48, 50, etc.) interposed between a prime mover (15) and drive wheel elements (12, 14), including a variable displacement pump (30), the speed and direction of which may be adjusted, and variable displacement motor (32), a second transmission (98, 100, 102, 104, 106, etc.) which causes differential drive between the two sides for steering, a steering device (96, 112, 114) which causes step-less increase or decrease (control through 112) of a second motor (98) to achieve differential steering; wherein a reverse operation comprises arranging for the turning of the pump (30) in the opposite direction (col. 3, lines 48-51), and the changing of the steering direction (through 116) such that the steering transmission is switched to the opposite direction. While Hopkins et al. fail to specifically state that the reverse control both shifts the direction of the first pump and the steering direction control valve (116) it is deemed an inherent feature, in that the switching of the steering control direction is expressly taught as being associated with the engagement of a reverse drive mode (col. 4, lines 15-17).

Claim Rejections - 35 USC § 103

4. The pertinent portions of 35 USC may be found in a previous office action.
5. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hopkins et al. (Cited above). The reference to Hopkins et al. is discussed above and fails to teach the reversing control as being a pedal or handle, in that the precise nature of the control device is not mentioned. Both control pedals and control levers provided with handles are extremely old and well known as vehicle operator interface devices, and as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the reversing control as either a handle or a pedal for the

purpose of allowing a user to operate the function using a commonly known interface device.

6. Claims 19-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hopkins et al. in view of Seaberg (US 4,471,669). The reference to Hopkins et al. is discussed above and fails to teach the steering transmission as being driven by a variable displacement pump, and including a variable displacement motor. Seaberg teaches that it is old and well known to separate out the pump and motor sets for driving (26, 30) and steering (28, 32), each being of variable displacement. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide separate pump and motor sets for each of the steering and driving functions of Hopkins et al. as suggested by Seaberg, for the purpose of insuring a separate source of supply for each function, so as to prevent pressure or capacity robbing between the two systems, to the point the engine is capable of driving both pumps, and to make each motor-pump set to be of variable displacement so as to reduce the quantity of external extra valving, and to use a minimum number of different types of components (i.e., the avoidance of plural types of motors or pumps).

As specifically regards claims 20, 21, 23 and 25, the references to Hopkins et al. and Seaberg fail to teach the reversing control as being a pedal or handle and the speed control device as being a pedal, in that the precise nature of the control devices are not mentioned. Both control pedals and control levers provided with handles are extremely old and well known as vehicle operator interface devices, and as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the reversing control as either a handle or a pedal for the purpose of allowing a user to operate the function using a commonly known interface device. As more particularly regards claim 25, the use of an acceleration pedal which causes the acceleration of a vehicle without regard to the direction the transmission is set to drive, is extremely old and well known, and it would have been obvious to one of ordinary skill in the art at the time of the invention to use an accelerator pedal type interface in that it is universally familiar to vehicle operators.

Response to Comments

7. Applicant's comments have been carefully considered. Applicant's comments concerning the inherency of the operative connection between the reversing device and the first transmission are noted. The examiner does not agree with applicant's analysis in view of the following. Firstly, note the explicit teachings of the Hopkins reference as set forth at col. 4, lines 15-22. Hopkins clearly sets forth that the steering reversal occurs when a reverse mode is selected, and further notes that such is "necessary when driving in the reverse vehicle mode". In view of Hopkins' very explicit teaching that such a reversal is "necessary" in the reverse driving mode, the inherency of the operation is not deemed an unreasonable interpretation. Secondly, for such a function to actually occur, as Hopkins teaches that it indeed necessarily does (see above), an "operative connection", to the breadth claimed would be necessary for such a feature to function.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Applicant has suggested that Hopkins' comment that the use of a single pump would be advantageous is noted, however the examiner does not agree that such a remark is sufficient to 'teach away' from a combination with a reference employing a plurality of pumps. Hopkins teaches no disadvantage associated with the use of plural pumps, and in this case, it would not be deemed to be beyond the skill of the ordinary practitioner to employ a further pump, for example, in order to insure a separate source of supply for each function, so as to prevent pressure or capacity robbing between the driving and steering systems.

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Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 703-308-0424. Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is 703-308-1113.

As of May 1, 2003, any response to this action should be mailed to:

Mail Stop _____
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450,

Or faxed to one of the following fax servers:

Regular Communications/Amendments: 703-872-9326
After Final Amendments: 703-872-9327
Customer Service Communications: 703-872-9325

F. VANAMAN
Primary Examiner
Art Unit 3618


9/29/04